

WHAT IS CLAIMED IS:

1        1.        A writing head for forming an electrostatic latent image on a  
2        cylindrical image carrier, comprising:

3                a flexible film substrate;

4                a plurality of writing electrodes, arranged on a first face of the film  
5        substrate in a first direction parallel with an axial direction of the image carrier,  
6        the writing electrodes adapted to be abutted against an outer periphery of the  
7        image carrier to provide electric charges thereto;

8                a first wiring member, arranged on the first face of the film substrate  
9        to supply signals from a first electrode driver to a first electrode group in the  
10       writing electrodes; and

11               a second writing member, arranged on a second face of the film  
12       substrate to supply signals from a second electrode driver to the second  
13       electrode group in the writing electrodes.

1        2.        The writing head as set forth in claim 1, wherein the film substrate is  
2        formed with at least one through hole through which the second wiring member  
3        extends to the second electrode group.

1        3.        The writing head as set forth in claim 1, wherein the second wiring  
2        member extends to the second electrode group via a side edge of the film  
3        substrate.

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1        4.        The writing head as set forth in claim 1, wherein the first face and the  
2        second face of the film substrate are defined by a single outer face of a folded  
3        film member.

1        5.        The writing head as set forth in claim 1, wherein the writing electrodes  
2        are arranged so as to form a plurality of arrays which are arranged in a second  
3        direction perpendicular to the first direction.

1        6.        The writing head as set forth in claim 5, wherein the writing electrodes  
2        are arranged such that writing electrodes in adjacent arrays forms a zigzag  
3        arrangement with regard to the first direction.

1        7.        The writing head as set forth in claim 5, wherein the writing electrodes  
2        are arrayed with regard to both of the first direction and the second direction.

1        8.        The writing head as set forth in claim 1, wherein:  
2                the film substrate comprises a first layer forming the first face and a  
3                second layer forming the second face;  
4                the wiring head further comprises a third wiring member, arranged  
5                between the first layer and the second layer to supply signals from a third  
6                electrode driver to a third electrode group in the writing electrode.

1        9.        The writing head as set forth in claim 1, wherein the film substrate is  
2        integrally formed with a reinforcement member which provides a reinforcement  
3        for the film substrate in a second direction perpendicular to the first direction.

1     10.     The writing head as set forth in claim 9, wherein the reinforcement  
2     member extends in the first direction so as to support at least a region where  
3     the writing electrodes are arranged.

1     11.     The writing head as set forth in claim 10, wherein:  
2             the writing electrodes are arranged so as to form a plurality of arrays  
3     which are arranged in the second direction; and  
4             the reinforcement member extends in the second direction so as to  
5     support at least a region where the arrays of the writing electrodes are  
6     arranged.

1     12.     The writing head as set forth in claim 9, wherein the reinforcement  
2     member extends so as to avoid a portion where each of the writing electrodes  
3     is disposed.

1     13.     An image forming apparatus for forming a visible image from the  
2     electrostatic latent image formed by the wiring head as set forth in claim 1.

1     14.     A writing head for forming an electrostatic latent image on a  
2     cylindrical image carrier, comprising:  
3             a flexible film substrate;  
4             a plurality of writing electrodes, arranged on a first face of the film  
5     substrate in a first direction parallel with an axial direction of the image carrier,  
6     the writing electrodes adapted to be abutted against an outer periphery of the

7 image carrier to provide electric charges thereto;  
8 a wiring member, arranged on the first face of the film substrate to  
9 supply signals from an electrode driver to the writing electrodes; and  
10 a reinforcement member, integrally formed with the film substrate to provide a  
11 reinforcement for the film substrate in a second direction perpendicular to the  
12 first direction.

1 15. The writing head as set forth in claim 14, wherein the reinforcement  
2 member extends in the first direction so as to support at least a region where  
3 the writing electrodes are arranged.

1 16. The writing head as set forth in claim 15, wherein:  
2 the writing electrodes are arranged so as to form a plurality of arrays  
3 which are arranged in the second direction; and  
4 the reinforcement member extends in the second direction so as to  
5 support at least a region where the arrays of the writing electrodes are  
6 arranged.

1 17. The writing head as set forth in claim 14, wherein the reinforcement  
2 member extends so as to avoid a portion where each of the writing electrodes  
3 is disposed.

1 18. The writing head as set forth in claim 14, wherein the reinforcement  
2 member is formed on a second face of the film substrate.

1 19. An image forming apparatus for forming a visible image from the  
2 electrostatic latent image formed by the wiring head as set forth in claim 14.

1 20. A method of manufacturing a writing head for forming an electrostatic  
2 latent image on an image carrier, comprising steps of:

3 providing a flexible film member;

4 forming a plurality of writing electrodes on a first face of the film  
5 member;

6 forming a first wiring member on the first face of the film member so  
7 as to be connected to a first electrode group in the writing electrodes;

8 forming a second wiring member on the first face of the film member  
9 so as to be connected to a second electrode group in the writing electrodes;

10 defining a folding line on the film member so as to avoid the writing  
11 electrodes; and

12 folding the film member at the folding line to form a film substrate,  
13 such that the first wiring member and the second wiring member are arranged  
14 on opposite faces of the film substrate.

1 21. The manufacturing method as set forth in claim 20, further comprising  
2 a step of applying an adhesive agent on at least a part of a second face of the  
3 film member which is to be an inner face at the step of folding the film member.